

# Service Manual

**National**  
TAPE RECORDER  
**Panasonic**

## DELUXE PORTABLE TAPE RECORDER WITH BUILT-IN MICROPHONE



**RQ-413S MECHANISM SERIES**

MODEL **RQ-413S**

### SPECIFICATIONS

Power Source:	AC: 90~109/110~125/200~219/ 220~250 volts; 50/60 Hz	Rewind Time:	Approx. 90 seconds with C-60 cassette tape
	DC: 6 volts (4-"C" size batteries) Car/boat battery: with optional car/boat adaptor RP-916, RP-914E in Europe.	Frequency Response:	50~10,000 Hz
Power Consumption:	About 6 W	Inputs:	"MIC" --72 dB (0.25 mV) applicable microphone impedance 200~600Ω "AUX IN" --22 dB 100 KΩ
Maximum Output:	1.2 W...RMS (max.)	Output:	"MONITOR" 8Ω
Track System:	2 tracks, monaural	Recording Time:	One hour (two-way, using C-60 cassette tape)
Recording System:	AC bias	Speaker:	3-1/2" (90 mm) dynamic speaker
Tape Speed:	1-7/8 ips. (4.8 cm/s)	Dimensions:	5-1/2" (W) × 2-3/8" (H) × 10-1/8" (D) (138 mm(W) × 71 mm(H) × 259 mm(D))
Fast Forward Time:	Approx. 90 seconds with C-60 cassette tape	Weight:	4 lbs. (1.8 Kg)

These specifications are subject to change in order to accommodate improvements in design.

**MATSUSHITA ELECTRIC**  
**MATSUSHITA ELECTRIC TRADING CO., LTD.**  
P. O. Box 288 Central, Osaka, Japan



# LOCATION OF PARTS

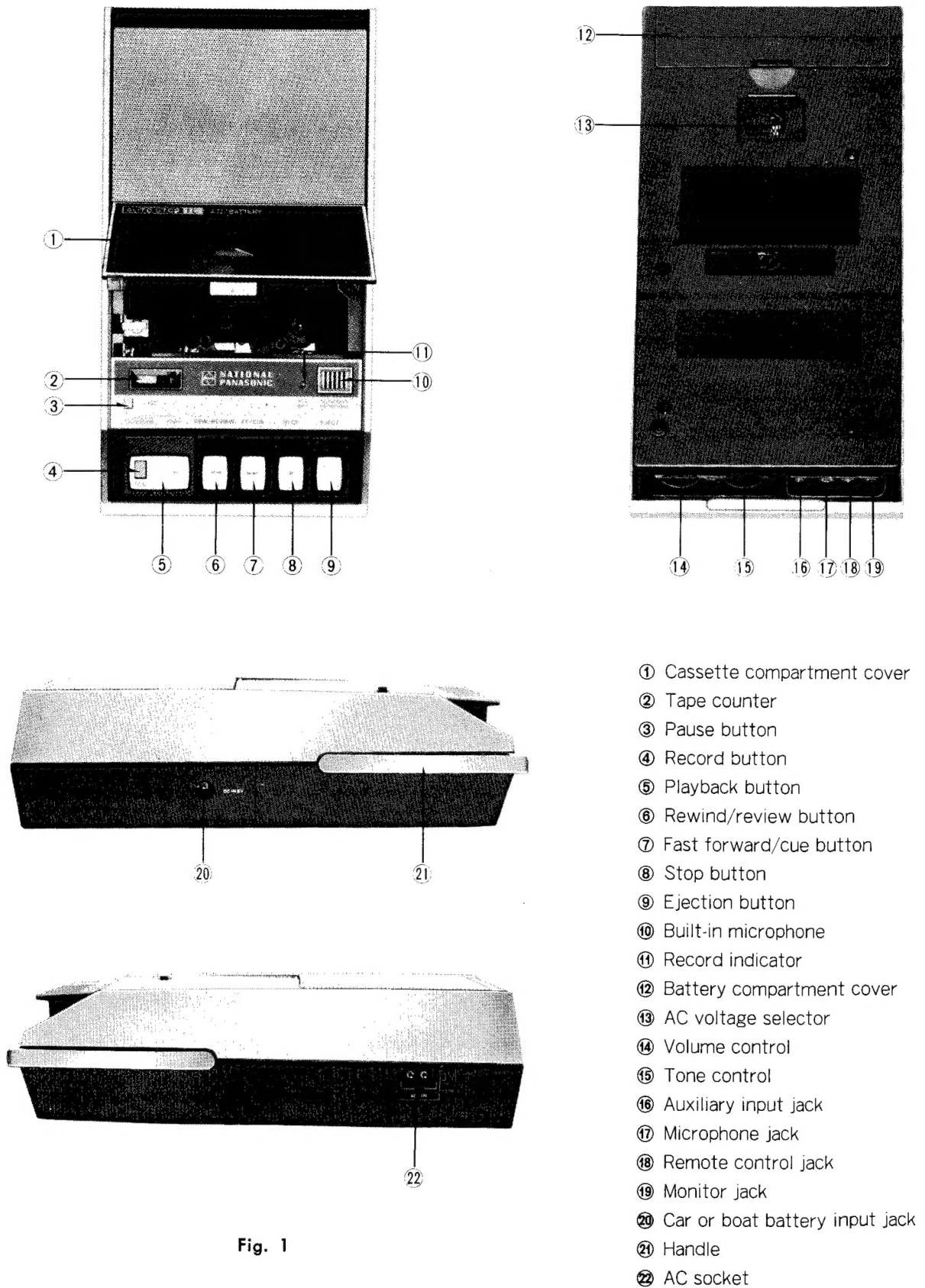
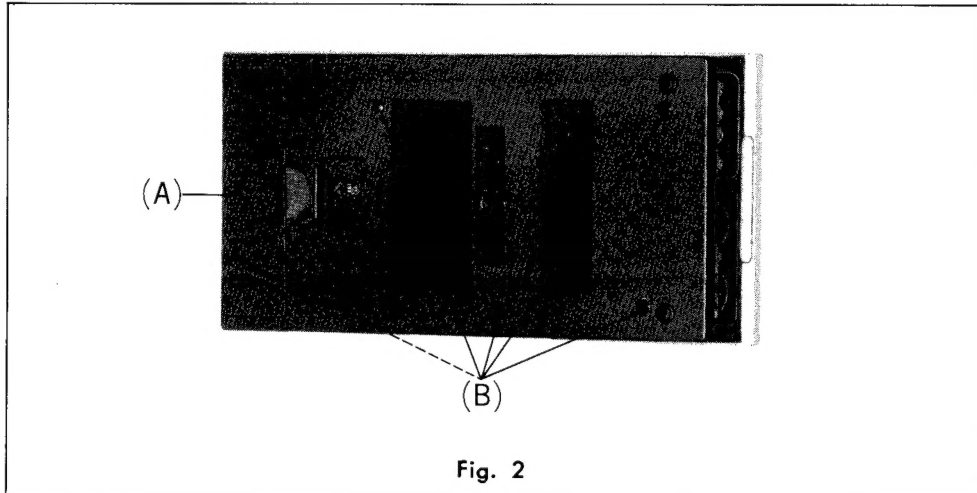


Fig. 1

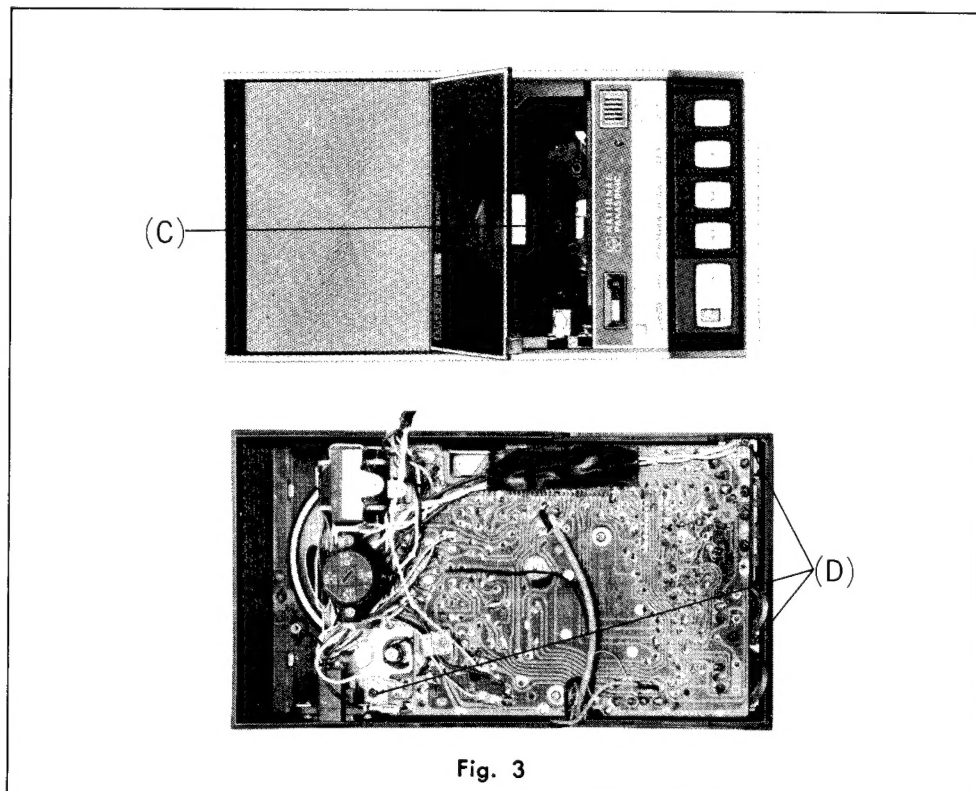
# DISASSEMBLY INSTRUCTIONS

## HOW TO REMOVE BOTTOM CASE



1. Remove the battery cover (A).
2. Remove 5 bottom case holding screws (B).

## HOW TO REMOVE CHASSIS



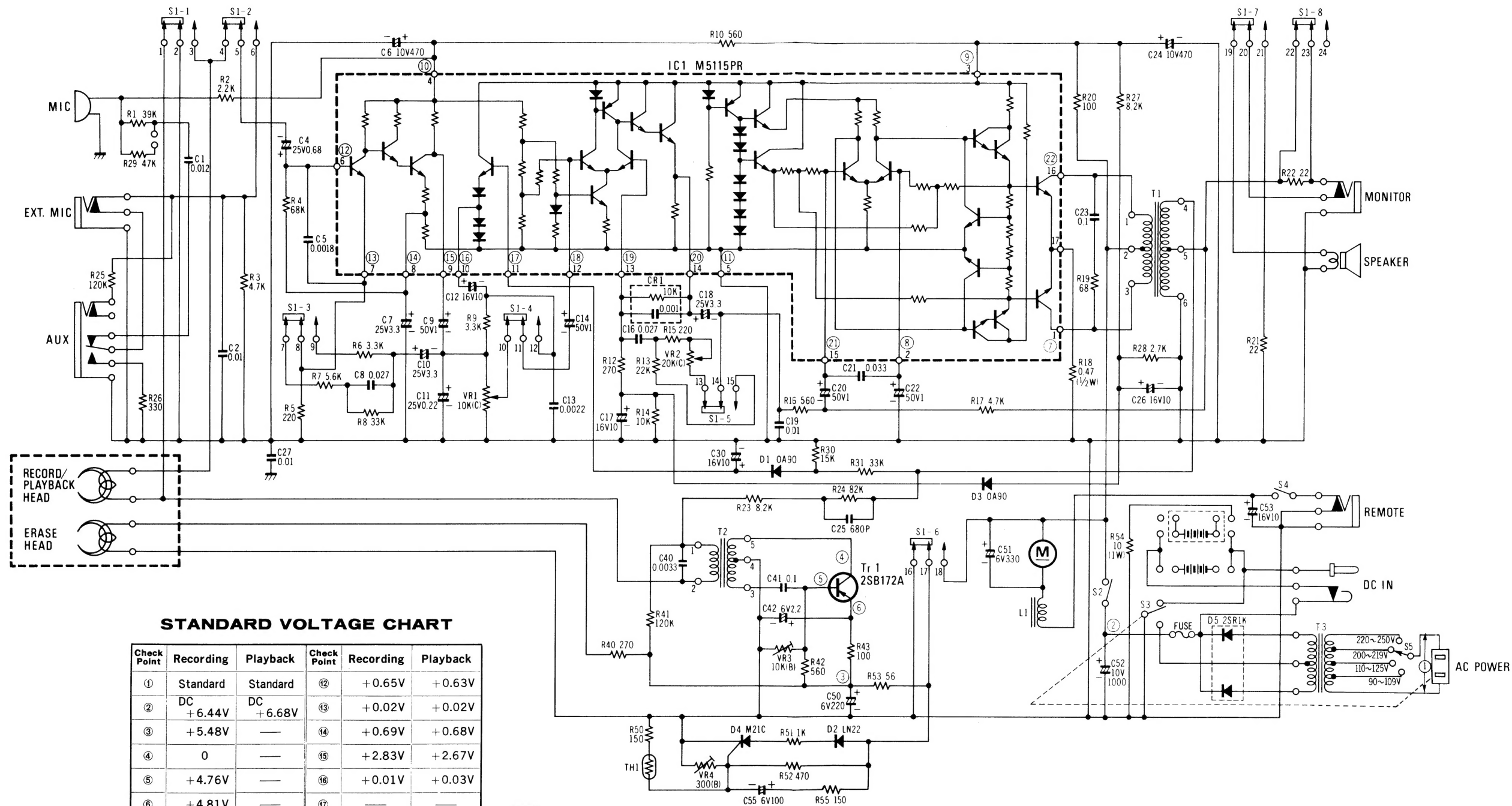
1. Remove the body case holding screw (C).
2. Remove 3 chassis holding screws (D).
3. Open the cassette lid and take out the chassis.

## STANDARD VALUE FOR TEST

	ITEM	VALUE	PARTS TO BE ADJUSTED	REMARKS
1	Recording bias current.	$0.5 \pm 0.1$ $-0.05$ mA	VR3	—
2	Input level.	"MIC" $-72 \pm 4$ dB "AUX" $-20 \pm 4$ dB	—	To obtain $40\mu\text{A}$ of current through the head. Stop the bias oscillation by unsoldering point A show in printed circuit board view on page 5.
3	Bias oscillation frequency.	$36 \pm 5$ KHz	—	—
4	Erase current.	$8 \pm 1$ mA	—	—
5	Wow & flutter.	RMS: 0.3%	—	—
6	Tape speed deviation.	$\pm 3\%$	—	—
7	Takeup tension.	$55 \pm 15$ gr-cm	—	—
8	Pressure of pressure roller.	$400 \pm 50$ gr	—	Measure the value at the moment when the pressure roller moves away from the capstan.
9	Tension of detect piece.	$50 \pm 10$ gr	—	—



# SCHEMATIC DIAGRAM MODEL RQ-413S



STANDARD VOLTAGE CHART

Check Point	Recording	Playback	Check Point	Recording	Playback
①	Standard	Standard	⑫	+0.65V	+0.63V
②	DC +6.44V	DC +6.68V	⑬	+0.02V	+0.02V
③	+5.48V	—	⑭	+0.69V	+0.68V
④	0	—	⑮	+2.83V	+2.67V
⑤	+4.76V	—	⑯	+0.01V	+0.03V
⑥	+4.81V	—	⑰	—	—
⑦	+6.43V	+6.67V	⑱	+1.35V	+1.31V
⑧	+1.95V	+1.95V	⑲	+1.46V	+1.41V
⑨	+5.49V	+5.70V	⑳	+2.91V	+2.79V
⑩	+4.59V	+4.77V	㉑	+1.95V	+1.94V
⑪	0V	0V	㉒	+6.67V	+6.43V

NOTE:

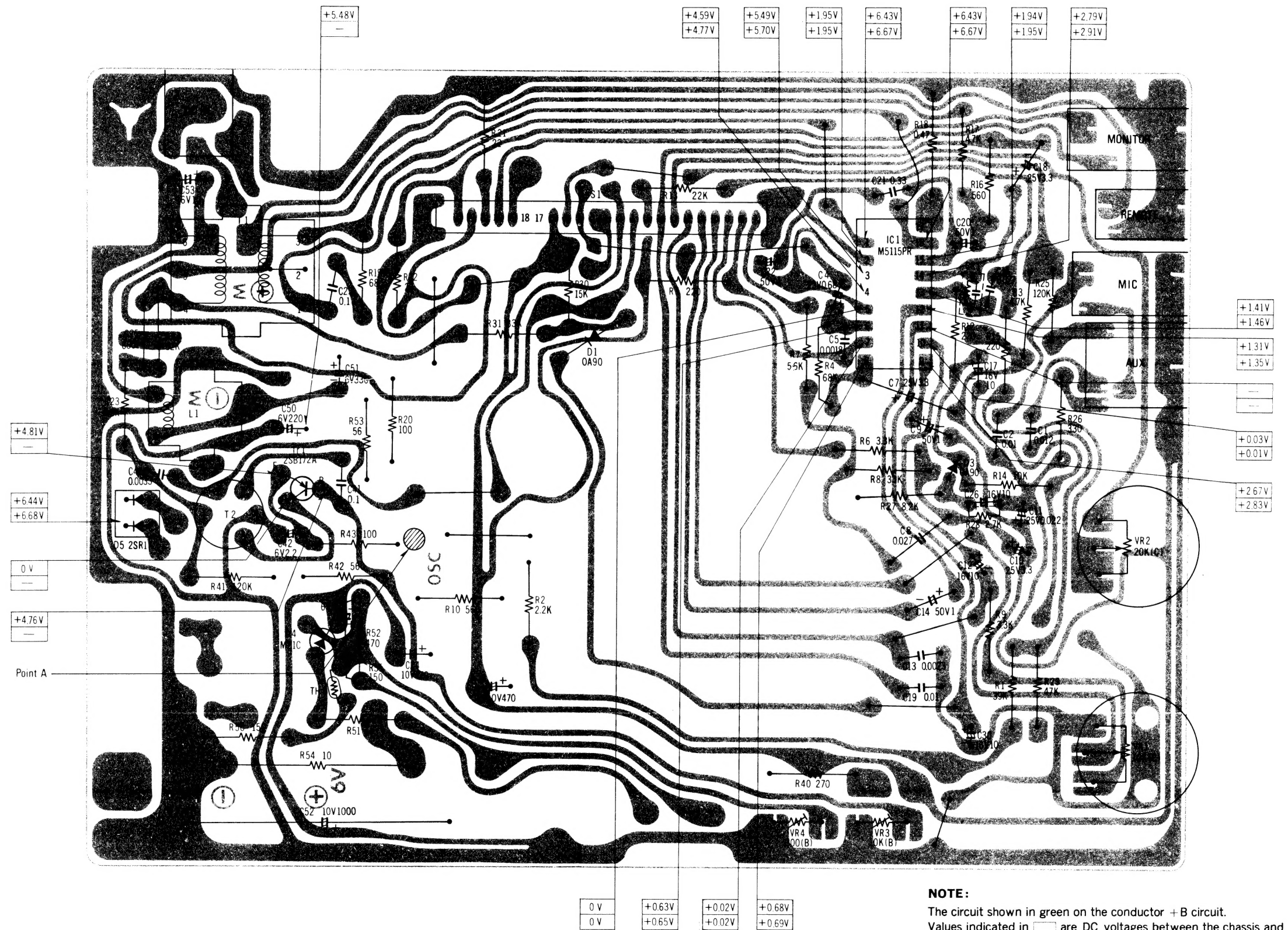
All measurements are under no signal conditions with volume at minimum position.

Use VTVM for voltage measurements.

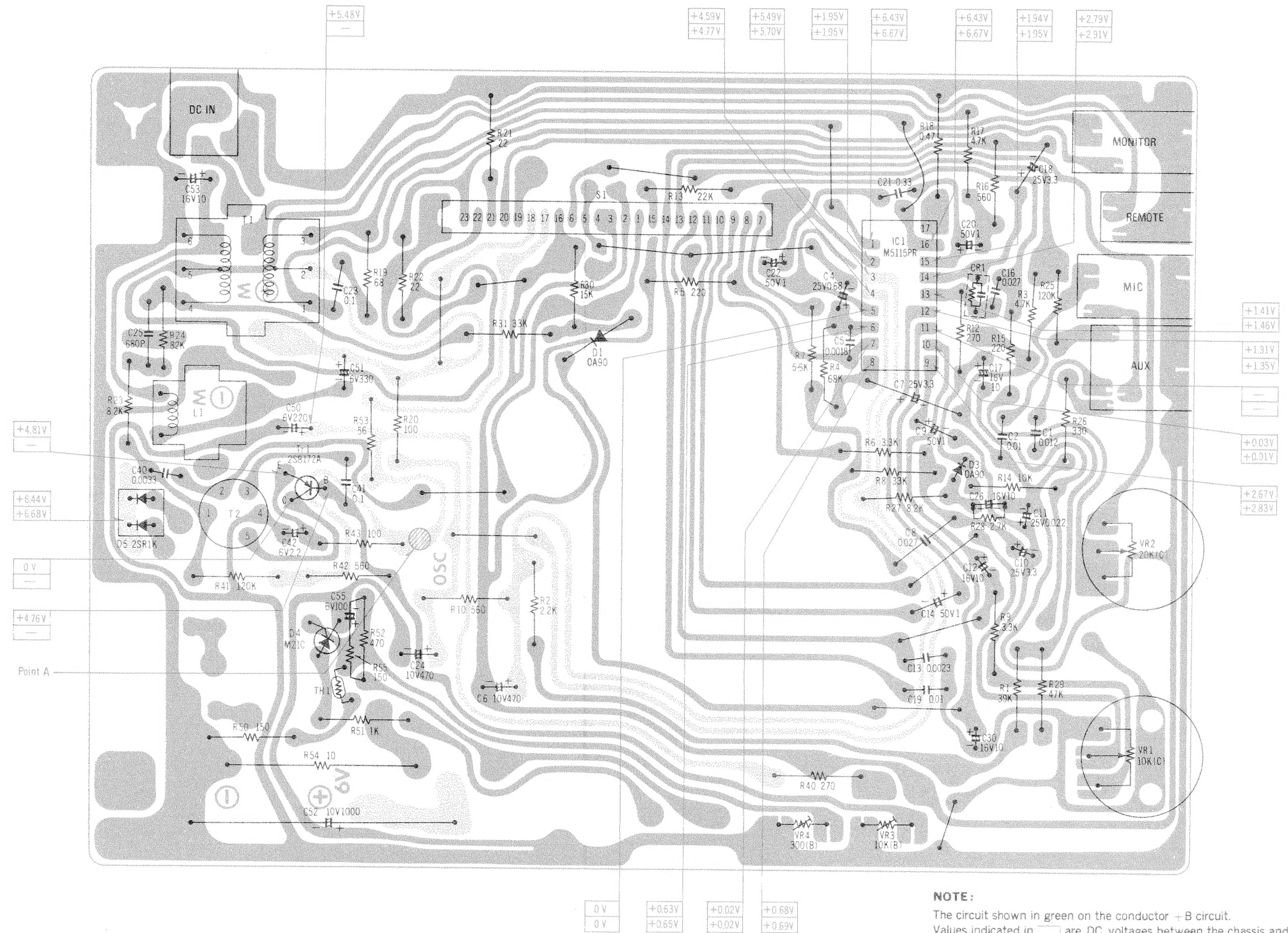
NOTE:

- S1-1~S1-8.....Record / playback select switch (shown in playback position).
- S2 ..... Power ON, OFF switch (Leaf switch).
- S3 ..... AC / DC select switch (Coupled with AC socket).
- S4 ..... Pause switch.
- S5 ..... AC voltage select switch.
- VR1 ..... Volume control.
- VR2 ..... Tone control.
- VR3 ..... Bias current adjusting VR.
- VR4 ..... Battery check adjusting VR.
- Resistors value are in ohms ( $\Omega$ ), 1.4 watt unless specified otherwise. K=1,000 $\Omega$ .
- Capacitors value are in microfarad ( $\mu F$ ) unless specified otherwise. P=Pico-farads.
- Encircled numbers (○) show the checkpoints for voltage. The values are marked in the standard voltage chart.

# CIRCUIT BOARD

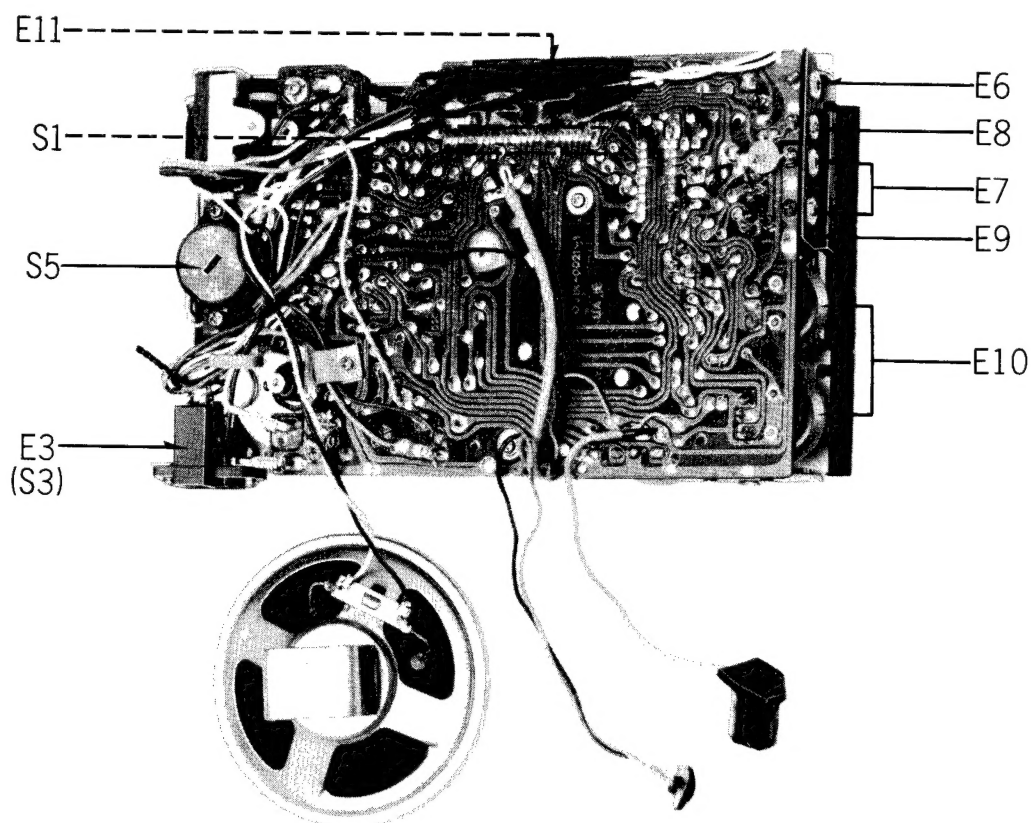
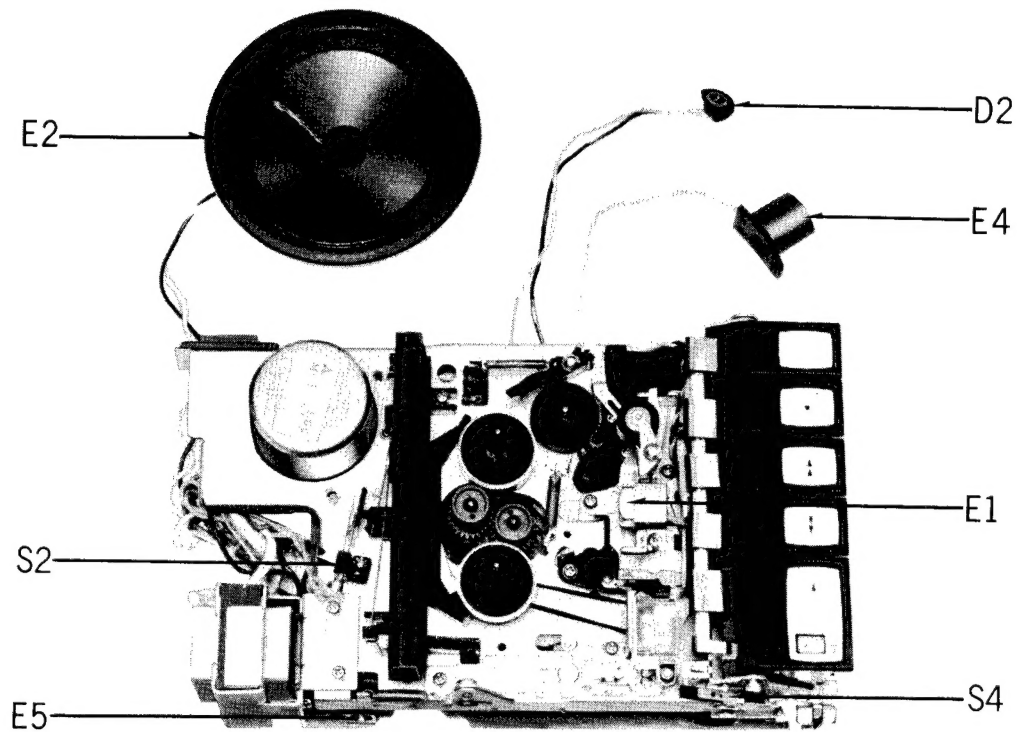


# CIRCUIT BOARD

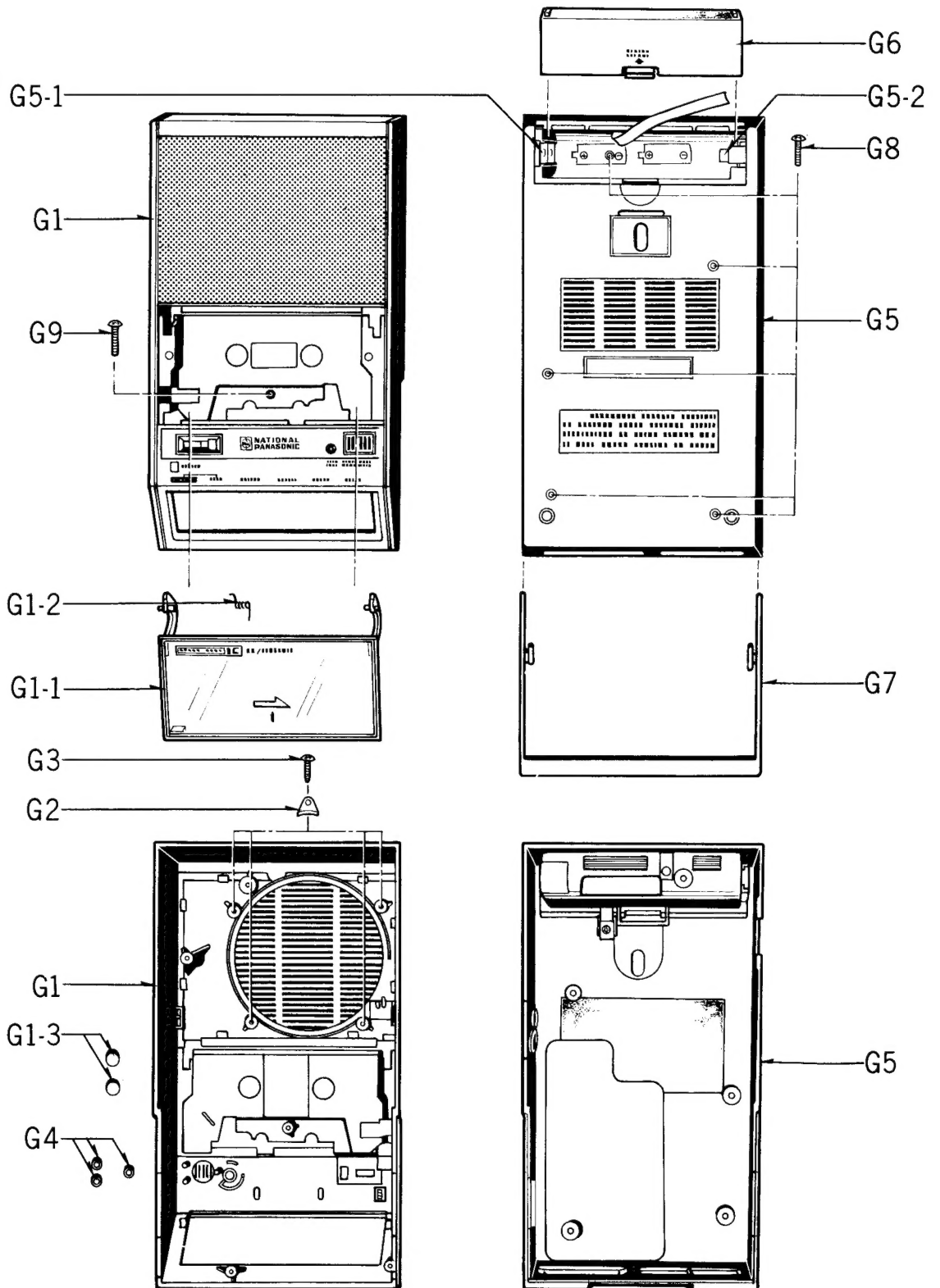




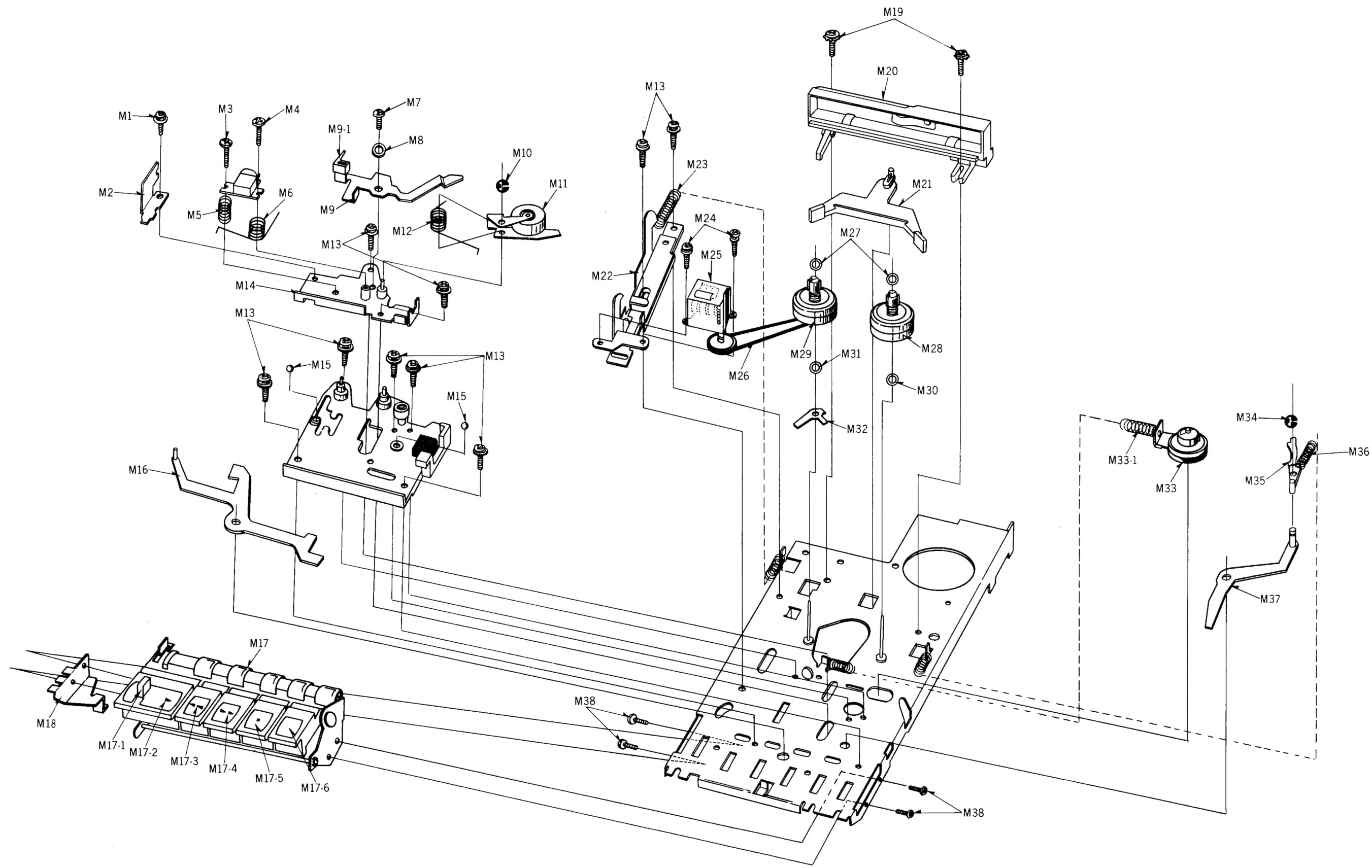
# ELECTRICAL PARTS LOCATION

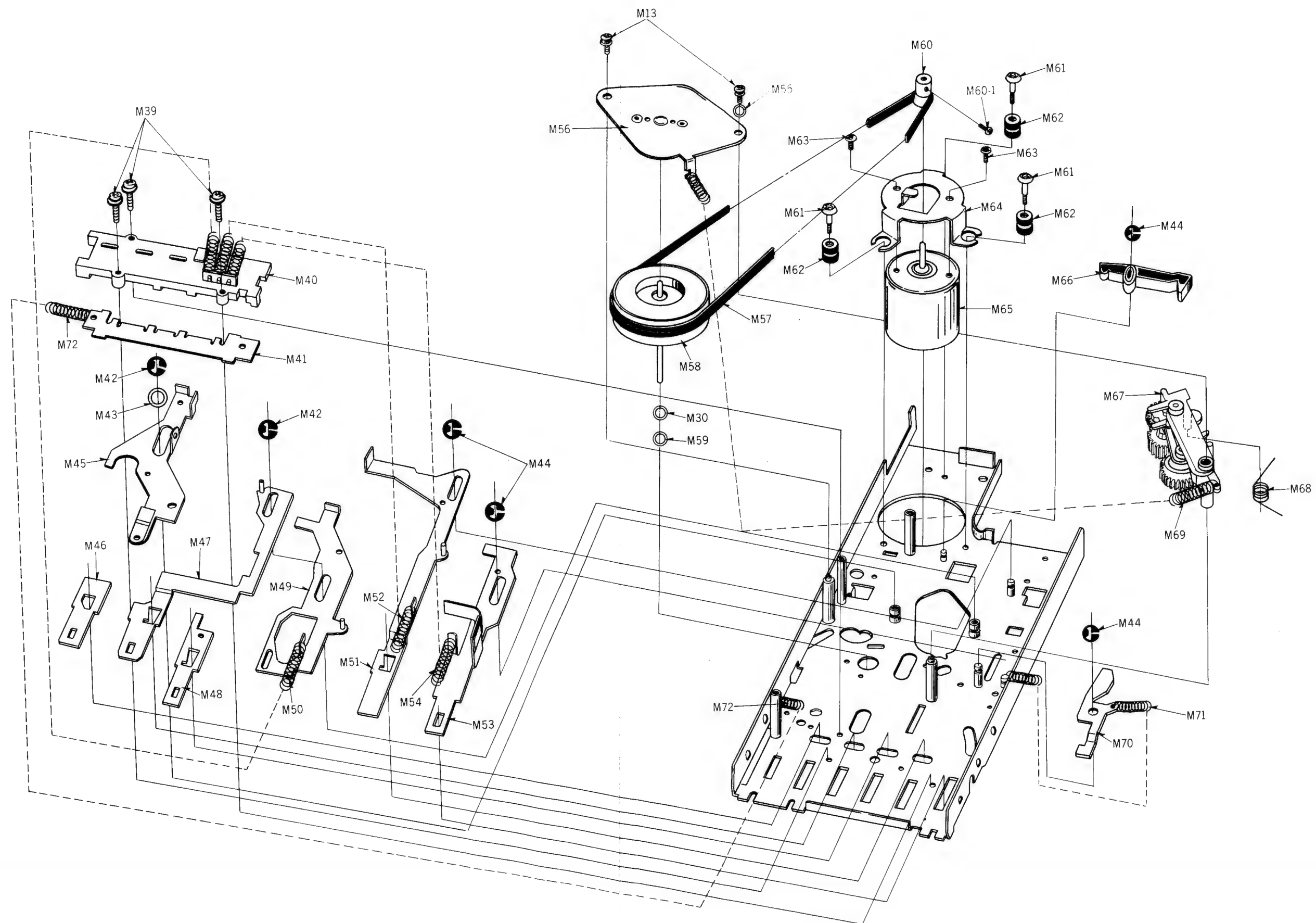


# CABINET PARTS



EXPLODED VIEWS

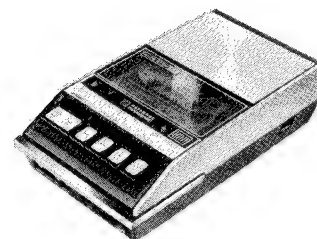




# REPLACEMENT PARTS LIST

MODEL RQ-413S

NATIONAL PANASONIC



RQ-413S

## NOTE:

1. Be sure to make your orders of Replacement Parts according to this List.
2. "X" in "Rank" Column indicates that the part are not supplyable.
3. "A, B and C" in "Rank" Column indicates the recommended stock of replacement parts. Refer to the recommended stock table on last page.
4. "N" in "Remarks" Column indicates New Parts.
5. "ISO" in "Remarks" Column indicates ISO Screw or Nut.
6. "K" in indicates the serrated parts with 18 notches.

## NOTA:

1. Habrá que asegurarse que los pedidos de piezas de repuesto se hagan según esta lista.
2. "X" marcado en la columna "Rank", quiere decir que dichas piezas no pueden ser provistas.
3. "A, B y C" marcadas en la columna "Rank" indican el surtido que se recomienda tener de dichas piezas de repuesto.
4. "N" marcado en la columna "Remarks", quiere decir que las piezas son nuevas.
5. "ISO" marcado en la columna "Remarks", quiere decir que es un tornillo o tuerca "ISO".
6. "K" indica las partes dentadas con 18 ranuras.

## NOTE:

1. Bien s'assutet de se conformer à la liste suivante pour les commandes de pièces de rechange.
2. "X", dans la colonne "Rank", indique qu'il n'est pas possible de fournir ces pièces.
3. "A, B et C", dans la colonne "Rank", indiquent le stock recommandé de pièces de rechange. Se reporter en dernière page au tableau des stocks/recommandés.
4. "N", dans la colonne "Remarks", indique les pièces nouvelles.
5. "ISO", dans la colonne "Remarks", indique une vis ou un écrou ISO.
6. "K" indique les pièces cannelées à 18 crans.

## HINWEIS:

1. Bestellen Sie Ihre Ersatzteile genau nach dieser Liste.
2. Mit "X" in der "Rank" Spalte aufgeführte Teile können nicht geliefert werden.
3. "A, B und C" in der "Rank" Spalte zeigt Ihnen den Vorrat der Ersatzteile an.
4. "N" in der "Remarks" Spalte bedeutet "neue Teile".
5. "ISO" in der "Remarks" Spalte bedeutet ISO-Schraube oder Mutter.
6. "K" bezeichnet die gezähnten Teile mit 18 Zähnen.

## 按:

1. 關於代用零件之訂購，務請依照此表而行之為荷。
2. 「等級」(Rank) 一欄中之 "X" 標記表示該零件無從供應。
3. 「等級」(Rank) 一欄中之 "A, B, C" 標記表示該零件有存貨，值得介紹。  
請參照最後一頁的「值得介紹存貨表」。
4. 「備考」(Remarks) 一欄中之 "N" 形符號標記表示該零件為新出品。
5. 「備考」(Remarks) 一欄中之 "ISO" 符號標記表示國際標準化機構 (ISO) 式螺絲或螺母。
6. "K" 形符號標記表示備有 18 個凹槽的鋸齒狀零件。



Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
		<b><u>MECHANICAL PARTS</u></b>					
<b>C</b>	M1	Sems Screw $\oplus 2 \times 4$	XYN2+C4	1			COMMON
<b>B</b>	M2	Tape Guide	QAG1178A	1			RQ-309S, 409S
<b>C</b>	M3	Screw $\oplus 2 \times 10$	XSB2D10	1			COMMON
<b>C</b>	M4	Screw $\oplus 2 \times 5$	XSB2D5	1			”
<b>B</b>	M5	Head Adjust Spring	QBC1157	1			RQ-209DS, 309S, 409S, 412S
<b>B</b>	M6	Auto Stop Lever Spring	QBN1334	1			Ⓝ
<b>C</b>	M7	Screw $\oplus 2.6 \times 5$	XSS26+5	1			COMMON
<b>C</b>	M8	Detecting Lever Spacer	QMC0008	1			Ⓝ
<b>C</b>	M9	Auto Stop Detecting Lever Assembly	QXL0743	1			Ⓝ
<b>B</b>	M9-1	Detecting Piece	QBJ1538	1			RQ-222AS, 237S, 309S, 409S
<b>C</b>	M10	Stop Ring $E2.3\phi$	XUC23FT	1			COMMON
<b>A</b>	M11	Pressure Roller Assembly	QXP0447	1			Ⓝ
<b>B</b>	M12	Pressure Roller Spring	QBN1335	1			Ⓝ
<b>C</b>	M13	Sems Screw $\oplus 2.6 \times 6$	XYN26+C6	11			COMMON
<b>C</b>	M14	Head Plate Unit	QXK1416	1			Ⓝ
<b>B</b>	M15	Thrust Steel Ball $2.5\phi$	QDK1012	2			COMMON
<b>B</b>	M16	Eject Lever Unit	QXL0739	1			Ⓝ
<b>B</b>	M17	Push Button Assembly	QXA0230	1			Ⓝ
<b>B</b>	M17-1	Record Button	QXB0199	1			Ⓝ
<b>B</b>	M17-2	Playback Button	QXB0198	1			Ⓝ
<b>B</b>	M17-3	Rewind Button	QXB0196	1			Ⓝ
<b>B</b>	M17-4	Fast Forward Button	QXB0197	1			Ⓝ
<b>B</b>	M17-5	Stop Button	QXB0194	1			Ⓝ
<b>B</b>	M17-6	Eject Button	QXB0195	1			Ⓝ
<b>C</b>	M18	Print Base Holding Angle	QMA2121	1			Ⓝ
<b>C</b>	M19	Sems Screw $\oplus 2.6 \times 8$	XYN26+E8	2			COMMON
<b>C</b>	M20	Cassette Retainer Unit	QXQK0018	1			RQ-309S
<b>B</b>	M21	Brake	QBJ1941	1			RQ-309S, 409S, 421S
<b>C</b>	M22	Counter Table Unit	QXA0224	1			Ⓝ
<b>C</b>	M23	Eject Spring	QBT1714	1			Ⓝ
<b>C</b>	M24	Sems Screw $\oplus 2 \times 5$	XYN2+C5	2			COMMON
<b>A</b>	M25	Tape Counter	QDC0044	1			RQ-237S 238FDS, 421S
<b>A</b>	M26	Counter Belt	QDB0182	1			Ⓝ


Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
<b>B</b>	M27	Snap Washer	QWQ1124	2			RQ-237S, 309S, 409S, 421S
<b>A</b>	M28	Takeup Reel Table Assembly	QXP0319	1			"
<b>A</b>	M29	Supply Reel Table Assembly	QXP0022	1			RQ-409S
<b>B</b>	M30	Nylon Washer	QBJ3220	2			RQ-237S, 309S, 409S, 421S
<b>B</b>	M31	Tetoron Washer	QBJ3104	1			RQ-207S, 208S
<b>B</b>	M32	Backtension Spring	QBPK0032	1			RQ-309S, 409S
<b>A</b>	M33	Idler Lever Assembly	QXLK0115	1			RQ-309S
<b>B</b>	M33-1	Idler Lever Spring	QBT0013	1			RQ-309S, 409S, 421S
<b>C</b>	M34	Stop Ring E2.5φ	XUC25FT	1			COMMON
<b>B</b>	M35	Auto Stop Driving Pawl	QBJ1656	1			RQ-237S, 309S, 409S, 421S
<b>C</b>	M36	Auto Stop Spring	QBT0014	1			RQ-309S, 409S
<b>C</b>	M37	Auto Stop Driving Lever Unit	QXL0742	1			Ⓝ
<b>C</b>	M38	Screw ⊕2.6×6	XSS26+6	4			COMMON
<b>C</b>	M39	Sems Screw ⊕2.6×10	XYN26+C10	3			"
<b>C</b>	M40	Lever Guide	QGG0034	1			Ⓝ
<b>C</b>	M41	Lock Plate	QMR1359	1			Ⓝ
<b>C</b>	M42	Stop Ring E5φ	XUC5FT	2			COMMON
<b>C</b>	M43	Fiber Washer 6.2×11×1	QBK7130	1			RQ-237S, 309S, 409S, 421S
<b>C</b>	M44	Stop Ring E3φ	XUC3FT	4			COMMON
<b>C</b>	M45	Playback Rod-(A) Unit	QXR0038	1			Ⓝ
<b>C</b>	M46	Stop Rod	QMR1357	1			Ⓝ
<b>C</b>	M47	FF Rod-(B) Unit	QXR0040	1			Ⓝ
<b>C</b>	M48	Rewind Rod	QMR1356A	1			Ⓝ
<b>C</b>	M49	FF Rod-(A) Unit	QXR0041	1			Ⓝ
<b>C</b>	M50	Rewind Rod Spring	QBT1371	1			RQ-209S, 219S, 221S, 229S
<b>C</b>	M51	Playback Rod-(B) Unit	QXR0039	1			Ⓝ
<b>C</b>	M52	Playback Rod Spring-(A)	QBT1710	1			Ⓝ
<b>C</b>	M53	Record Rod Unit	QXR0042	1			Ⓝ
<b>C</b>	M54	Record Rod Spring	QBT1713	1			Ⓝ
<b>C</b>	M55	Flat Washer 2.6φ	XWP26	1			COMMON
<b>C</b>	M56	Flywheel Retainer Unit	QXHK0029	1			RQ-309S, 409S
<b>A</b>	M57	Flywheel Belt	QDB0141	1			RQ-237S, 309S, 409S, 421S
<b>A</b>	M58	Flywheel	QXFK0005	1			RQ-309S
<b>C</b>	M59	Washer	QBJ3221	1			RQ-309S, 409S
<b>A</b>	M60	Motor Pulley Assembly	QXP0347	1			Ⓝ

Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
<b>C</b>	M60-1	Screw $\oplus 2 \times 3$	XSN2+3	1			COMMON
<b>C</b>	M61	Motor Screw	QMS1833	3			RQ-409S, 421S, 438S
<b>C</b>	M62	Motor Rubber Cushion	QBG1055A	3			RQ-237S, 409S, 421S, RS-272US
<b>C</b>	M63	Screw $\oplus 2.6 \times 3$	XSN26+3	2			COMMON
<b>C</b>	M64	Motor Holding Angle	QMA2120	1			Ⓝ
<b>A</b>	M65	Motor	MHT5NT6K	1			Ⓝ
<b>C</b>	M66	Review Lever	QML2620	1			Ⓝ
<b>C</b>	M67	FF Frame Assembly	QXA0226	1			Ⓝ
<b>C</b>	M68	Gear Lever Spring	QBN1196	1			RQ-237S, 309S, 409S, 421S
<b>C</b>	M69	FF Lever Spring	QBTk0010	1			Ⓝ
<b>C</b>	M70	Record Lock Plate	QML2619	1			Ⓝ
<b>C</b>	M71	Record Lock Plate Spring	QBT1351	1			RS-280S
<b>C</b>	M72	Lock Plate Spring	QBT1584	1			RQ-309S, 409S
		<b><u>RESISTORS</u></b>					
<b>B</b>	R1	Carbon Resistor 39 K $\Omega$ 1/4 W	ERD14TJ393	1			
<b>B</b>	R2	" 2.2 K $\Omega$ 1/4 W	ERD14TJ222	1			
<b>B</b>	R3, 17	" 4.7 K $\Omega$ 1/4 W	ERD14TJ472	2			
<b>B</b>	R4	" 68 K $\Omega$ 1/4 W	ERD14TJ683	1			
<b>B</b>	R5, 15	" 220 $\Omega$ 1/4 W	ERD14TJ221	2			
<b>B</b>	R6, 9	" 3.3 K $\Omega$ 1/4 W	ERD14TJ332	2			
<b>B</b>	R7	" 5.6 K $\Omega$ 1/4 W	ERD14TJ562	1			
<b>B</b>	R8, 31	" 33 K $\Omega$ 1/4 W	ERD14TJ333	2			
<b>B</b>	R10, 16, 42	" 560 $\Omega$ 1/4 W	ERD14TJ561	3			
<b>B</b>	R12, 40	" 270 $\Omega$ 1/4 W	ERD14TJ271	2			
<b>B</b>	R13	" 22 K $\Omega$ 1/4 W	ERD14TJ223	1			
<b>B</b>	R14	" 10 K $\Omega$ 1/4 W	ERD14TJ103	1			
<b>B</b>	R18	Wire-wound Resistor 0.47 $\Omega$ 1/2 W	ERM12PKR47	1			
<b>B</b>	R19	Carbon Resistor 68 $\Omega$ 1/4 W	ERD14TJ680	1			
<b>B</b>	R20, 43	" 100 $\Omega$ 1/4 W	ERD14TJ101	2			
<b>B</b>	R21, 22	" 22 $\Omega$ 1/4 W	ERD14TJ220	2			
<b>B</b>	R23, 27	" 8.2 K $\Omega$ 1/4 W	ERD14TJ822	2			
<b>B</b>	R24	" 82 K $\Omega$ 1/4 W	ERD14TJ823	1			
<b>B</b>	R25, 41	" 120 K $\Omega$ 1/4 W	ERD14TJ124	2			
<b>B</b>	R26	" 330 $\Omega$ 1/4 W	ERD14TJ331	1			

Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
<b>B</b>	R28	Carbon Resistor 2.7 K $\Omega$ 1/4 W	ERD14VJ272	1			
<b>B</b>	R29	" 47 K $\Omega$ 1/4 W	ERD14TJ473	1			
<b>B</b>	R30	" 15 K $\Omega$ 1/4 W	ERD14TJ153	1			
<b>B</b>	R50, 55	" 150 $\Omega$ 1/4 W	ERD14TJ151	2			
<b>B</b>	R51	" 1 K $\Omega$ 1/4 W	ERD14TJ102	1			
<b>B</b>	R52	" 470 $\Omega$ 1/4 W	ERD14TJ471	1			
<b>B</b>	R53	" 56 $\Omega$ 1/4 W	ERD14TJ560	1			
<b>B</b>	R54	Solid Resistor 10 $\Omega$ 1 W	ERC1GM100	1			
		<b><u>VARIABLE RESISTORS</u></b>					
<b>A</b>	VR1	Variable Resistor 10 K $\Omega$ (C)	EVJA2AT12C14	1			RQ-209DS, 221S
<b>A</b>	VR2	" 20 K $\Omega$ (C)	EVJA2AT12C24	1			RQ-421S
<b>A</b>	VR3	Semi-fixed Variable Resistor 10 K $\Omega$ (B)	EVLT8AA00B14	1			Ⓝ
<b>A</b>	VR4	" 300 $\Omega$ (B)	EVLT8AA00B32	1			Ⓝ
		<b><u>CAPACITORS</u></b>					
<b>C</b>	C1	Mylar Capacitor 0.012 $\mu$ F	ECQM05123MZ	1			
<b>C</b>	C2, 19	" 0.01 $\mu$ F	ECQM05103MZ	2			
<b>C</b>	C4	Aluminum Capacitor 0.68 $\mu$ F	ECAG25ER68	1			
<b>C</b>	C5	Mylar Capacitor 0.0018 $\mu$ F	ECQM05182MZ	1			
<b>B</b>	C6, 24	Electrolytic Capacitor 470 $\mu$ F	ECEA10V470L	2			
<b>B</b>	C7, 10, 18	" 3.3 $\mu$ F	ECEA25V3R3L	3			
<b>C</b>	C8, 16	Mylar Capacitor 0.027 $\mu$ F	ECQM05273MZ	2			
<b>B</b>	C9, 14, 20, 22	Electrolytic Capacitor 1 $\mu$ F	ECEA50V1L	4			
<b>C</b>	C11	Aluminum Capacitor 0.22 $\mu$ F	ECAG25ER22	1			
<b>B</b>	C12, 17, 26, 30, 53	Electrolytic Capacitor 10 $\mu$ F	ECEA16V10L	5			
<b>C</b>	C13	Mylar Capacitor 0.0022 $\mu$ F	ECQM05222MZ	1			
<b>C</b>	C21	" 0.033 $\mu$ F	ECQM05333MZ	1			
<b>C</b>	C23, 41	" 0.1 $\mu$ F	ECQM05104MZ	2			
<b>C</b>	C25	Styrol Capacitor 680 pF	ECQS1681KZ	1			
<b>C</b>	C27	Ceramic Capacitor 0.01 $\mu$ F	ECKD1H103PF	1			
<b>C</b>	C40	Mylar Capacitor 0.0033 $\mu$ F	ECQM05332MZ	1			
<b>C</b>	C42	Aluminum Capacitor 2.2 $\mu$ F	ECAG6E2R2	1			
<b>B</b>	C50	Electrolytic Capacitor 220 $\mu$ F	ECEA6V220L	1			
<b>B</b>	C51	" 330 $\mu$ F	ECEA6V330L	1			

Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
<b>B</b>	C52	Electrolytic Capacitor 1000 $\mu$ F	ECEB10V1000L	1			
<b>B</b>	C55	" 100 $\mu$ F	ECEA6V100L	1			
		<b><u>COMBINATION PART</u></b>					
<b>B</b>	CR1	CR Combination	QXAP102M103K	1			RQ-409S, 412S
		<b><u>TRANSISTOR</u></b>					
<b>A</b>	Tr1	Transistor	2SB172A	1			COMMON
		<b><u>DIODES &amp; RECTIFIERS</u></b>					
<b>A</b>	D1, 3	Diode	OA90	2			COMMON
<b>A</b>	D2	Luminous Diode	LN22	1			Ⓝ
<b>A</b>	D4	Silicon Controlled Rectifier	M21C	1			Ⓝ
<b>A</b>	D5	Silicon Rectifier	2SR1K	1			RQ-309S, 409S, 421S
		<b><u>INTEGRATED PART</u></b>					
<b>B</b>	IC1	Integrated Circuit	M5115PR	1			RS-253S, 2571S, 267S
		<b><u>TRANSFORMERS</u></b>					
<b>A</b>	T1	Output Transformer	QLA0383	1			RQ-443DS
<b>A</b>	T2	Oscillator Coil	QLB0135A	1			RQ-309S, 409S, 412S, 443DS
<b>A</b>	T3	Power Transformer	QLPN4AJH	1			Ⓝ
		<b><u>COIL</u></b>					
<b>B</b>	L1	Choke Coil	QLP0105	1			COMMON
		<b><u>THERMISTOR</u></b>					
<b>B</b>	TH1	Thermistor	QVM300	1			COMMON
		<b><u>SWITCHES</u></b>					
<b>A</b>	S1	Slide Switch (R/P Select)	QSS1176	1			RQ-309S, 443DS
<b>A</b>	S2	Leaf Switch (Power ON/OFF)	QSB0169B	1			RQ-309S, 409S, 421S
	S3	AC/DC Select Switch	(Ref. E3)	(1)			
<b>A</b>	S4	Leaf Switch (Pause)	QSB0214	1			Ⓝ
<b>A</b>	S5	Rotary Switch (AC Voltage Select)	QSR0005B	1			COMMON

Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
		<b><u>ELECTRICAL PARTS</u></b>					
<b>A</b>	E1	Head	WY034AZ	1			RQ-215S, 309S, 409S, 432DS
<b>A</b>	E2	Speaker	EAS9P70SH	1			Ⓝ
<b>B</b>	E3	AC Socket with S3	QJS0316H	1			RQ-309S, 432DS, 443DS, 444S
<b>A</b>	E4	Built-in Microphone	WM054W or WM054Z	1			Ⓝ
<b>B</b>	E5	DC IN Jack	QJA0137	1			Ⓝ
<b>B</b>	E6	AUX Jack	QJA0123	1			Ⓝ
<b>B</b>	E7	M3 Jack	QJAT0103	2			COMMON
<b>B</b>	E8	M2 Jack	QJAT0102	1			”
<b>C</b>	E9	Jack Plate	QGJK0016	1			Ⓝ
<b>A</b>	E10	Volume Knob	QGTK0009	2			RQ-309S, 409S
<b>A</b>	E11	Fuse Assembly	QEEK0084	1			Ⓝ
		<b><u>CABINET PARTS</u></b>					
<b>B</b>	G1	Main Case Assembly (without Speaker)	QYBK0101SW	1			Ⓝ 
<b>A</b>	G1-1	Cassette Lid	QKFK0015	1			Ⓝ
<b>B</b>	G1-2	Cassette Ejection Spring	QBN1192	1			RQ-227S
<b>C</b>	G1-3	Vibration Prevent Rubber	QBG1210	2			RQ-431S, 432DS
<b>C</b>	G2	Speaker Holding Metal	QKTK0004	4			Ⓝ
<b>C</b>	G3	Tapping Screw $\oplus 3 \times 6$	XTN3+6	4			COMMON
<b>C</b>	G4	Microphone Fixing Ring	QBG1326	3			RQ-309S, 409S
<b>B</b>	G5	Bottom Case Assembly	QYCK0074	1			Ⓝ
<b>C</b>	G5-1	Battery Terminal Assembly	QYQK0006	1			Ⓝ
<b>C</b>	G5-2	Battery Spring	QJBK0015	1			Ⓝ
<b>A</b>	G6	Battery Cover Assembly	QYDK0028	1			Ⓝ
<b>B</b>	G7	Handle	QKHK0005	1			Ⓝ
<b>C</b>	G8	Screw $\oplus 2.6 \times 6$	XSN26+6FC	5			COMMON
<b>C</b>	G9	Screw $\oplus 2.6 \times 11$	XSN26+11FC	1			”
		<b><u>ACCESSORIES</u></b>					
<b>A</b>	A1	Cassette Tape (Demo)	QFT1TCANAHZ	1			COMMON
<b>B</b>	A2	AC Power Cord	QFC1065	1			RQ-228S, 309S, 432DS, 443DS
<b>B</b>	A3	Carring Bag	QFKK0019	1			Ⓝ
<b>B</b>	A4	Microphone Bag	QFK0034	1			RQ-228S, 409S, 412S, 431S

Rank	Ref. No.	Description	Part No.	Pcs/ Set	Price (Per Pce.)		Remarks
<b>B</b>	A5	Plug Adaptor	QJP0603S	1			COMMON 
<b>B</b>	A6	Erase Plug	QJP0959	1			COMMON
<b>B</b>	A7	Instruction Book	QQT0609	1			Ⓝ
		<b><u>PACKINGS</u></b>					
<b>C</b>	P1	Gift-Box	QPNK0092	1			Ⓝ
<b>C</b>	P2	Inner Cushion-R	QPAK1009	1			Ⓝ
<b>C</b>	P3	Inner Cushion-L	QPAK1008	1			Ⓝ
<b>C</b>	P4	Dust Cover	XZB26×36A05	1			RQ-309S, 409S
<b>C</b>	P5	Accessory Box	QPW1126	1			RQ-227S

### RECOMMENDED STOCK OF REPLACEMENT PARTS

Rank of Part	Estimated Selling Q'ty of Tape Recorder Set					
	Less than 50	100	300	500	1,000	2,000
<b>A</b> rank Parts	2	5	15	20	40	80
<b>B</b> rank Parts	1	2	5	10	20	40
<b>C</b> rank Parts	0	1	3	5	10	20